### The Interior Design Project

A local radio station and three decorating stores are running a contest. You are given the opportunity to creatively redesign the interior of a room in your home (e.g., your bedroom). You will have a budget of $1000 to complete the project. You must plan design elements that use the budget effectively without exceeding the limit. The radio station will award a prize of $1000 (in goods and services) to the student that that creates the most complete and efficient plan, including a letter indicating why they would like to win this prize.

In this project you will:

* use ratio skills to create a scale drawing
* use research skills to explore alternative
* use decision making to spend your budget efficiently
* use technology to organize and summarize your investigations

## Assignment Outline

#### Step 1: Collect Measurements

* First, make a rough sketch of the floor and of each wall.
* Carefully measure the floor and the walls of your room, including the dimensions of any doors and windows, including any frame mouldings.
* Measure all dimensions in both metric units (metres) and Imperial units (feet/inches).
* Be sure to collect and record your data carefully.

#### Step 2: Scale Drawings

* Make an accurate scale drawing of the room using a scale of 1:24.
* Use ¼” or 0.5 cm graph paper.
* Make separate drawings for the floor and for each wall.

#### Step 3: Flooring

* Now let’s start decorating! Begin with the floor covering.
* Choose at least two flooring options to be researched (choose from carpet with underpadding, vinyl tiles, laminate or hardwood flooring, etc.).
* For each one you choose, find out the dimensions of the rolls/pieces that are available for purchase and the unit cost.
* Use your measurements to accurately calculate the quantity needed purchase to minimize waste and cost.
* Include taxes in the final cost.
* Can you install these items yourself (purchasing the necessary tools) or will you need to pay for installation?
* Calculate the total cost for floor covering.

#### Step 4: Wallcovering

* The walls will need fresh paint or wallpaper or a combination. You are to research the possibilities and related costs.
* For the paint, you will need to consider cost per can, coverage per can or litre, number of coats needed, cost of tools etc.
* For the wallpaper, you will need to consider the width and length of each roll (single, double or Euroroll), repeat and drop match of the pattern on the wallpaper, cost of tools, costs associated with the use of a border paper.
* Write a short report to summarize your research.
* Choose a wallcovering plan that you like and determine its cost.

#### Step 5: Window Covering

* The window(s) will require either drapes or blinds. Research the possibilities and related costs for these 2 options.
* How are blinds priced? Is installation hardware an additional cost? Will the blinds be window length or floor length? Show the cost of each alternative for your room.
* Curtains can be purchased ready-made. Research the cost of this option.
* It is also possible to make them yourself. For example, a cotton drapery fabric in your favourite colour is available in rolls 150 cm wide and is priced at $7.99/metre. If you were to make balloon drapes, you would need to purchase 2.5 times the width of the window and ¾ of the height of the window in fabric. Note that you usually will need to sew two or more pieces of fabric together to get the proper width.
* Determine the cost of self-made drapes, assuming that you have the skill and equipment to make them.

#### Step 6: The Proposal

* Summarize your plan and its total cost.
* List the tasks you will do yourself and those that require professional installation.
* Draft a letter to the radio station indicating why you should win the prize.
* Computer word processing and spreadsheet programs should be very helpful at this stage.

**MYP ASSESSMENT**

Criterion A—KNOWLEDGE AND UNDERSTANDING

|  |  |  |
| --- | --- | --- |
| **Achievement**  **Level** | **Level Descriptor** | **Task Specific Clarification** |
| **0** | The student does not reach a standard described by any of the descriptors given below. | |
| **1-2** | The student **attempts** to make deductions when solving **simple** problems in **familiar** contexts. | + Very limited understanding of the project  + Calculations include major errors and/or omissions.  + Budget is exceeded or no cost summary is provided. |
| **3-4** | The student **sometimes** makes **appropriate** deductions when solving **simple and**  **more-complex** problems in **familiar** contexts. | + Limited understanding of the project  + Calculations show some accuracy but include some errors or omissions.  + Cost summary is presented but budget may be exceeded. |
| **5-6** | The student **generally** makes **appropriate** deductions when solving **challenging** problems in a **variety** of **familiar** contexts. | + General understanding of the project  + Calculations are accurate with few errors or omissions.  + Proposal is realistic and within budget. |
| **7-8** | The student **consistently** makes **appropriate** deductions when solving **challenging** problems in a **variety** of contexts including **unfamiliar** situations. | + Complete and thorough understanding of the project  + Calculations are accurate and complete.  + Costs are within budget and include extra considerations. |

Criterion C—COMMUNICATION

|  |  |  |
| --- | --- | --- |
| **Achievement**  **Level** | **Level Descriptor** | **Task Specific Clarification** |
| **0** | The student does not reach a standard described by any of the descriptors given below. | |
| **1-2** | The student shows **basic** use of mathematical language **and/or** forms of mathematical representation. The lines of reasoning are **difficult to follow**. | + Completes the project, but many components may be missing.  + Presentation lacks organization and purpose  + Mathematical language, symbols, tables and visuals are rarely used or incorrectly used.  + Technology is used ineffectively or not at all. |
| **3-4** | The student shows **sufficient** use of mathematical language **and** forms of mathematical representation. The lines of reasoning are **clear** though not always **logical** or **complete**. The student moves between different forms of representation **with some success**. | + A proposal is presented but some components are missing.  + Some conclusions are presented but not supported by a detailed development  + Mathematical language, symbols, tables and visuals are used effectively some of the time.  + Technology is used somewhat effectively in the project. |
| **5-6** | The student shows **good** use of mathematical language **and** forms of mathematical representation. The lines of reasoning are **concise**, **logical** and **complete**. The student moves **effectively** between different forms of representation. | + Proposal is impressive and complete.  + A full presentation is offered and includes alternate choices and discusses their relative merits  + Mathematical language is used routinely and symbols, tables and visuals are used effectively.  + Technology is used effectively and creatively throughout the project. |

**Self-Assessed Checklist & Reflection**

**Quality of Performance (Approaches to Learning)**

**Student’s Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

0/1 = no/yes

0/1/2 = inadequate/average/excellent

|  |  |  |  |
| --- | --- | --- | --- |
| Step 1 Are all necessary Metric measurements present?  Are all necessary Imperial measurements present?  Are Measurements recorded clearly? | 0  0  0 | 1  1  1 | 2 |
| *Step 2*  Is a scale drawing included?  Are all walls and the floor included?  Is the scale drawing accurate for the measurements taken? | 0  0  0 | 1  1  1 | 2 |
| *Step 3*  Were at least 2 flooring options chosen?  Is research sufficiently complete to allow a cost to be calculated?  Is a cost calculated for each option?  Does material plan minimize waste and expense?  Does the costing reflect installation and any taxes? | 0  0  0  0  0 | 1  1  1  1  1 | 2  2 |
| *Step 4*  Were both painting and wallpapering considered?  Is research sufficiently complete to allow a paint cost to be calculated?  Is research sufficiently complete to allow a wallpaper cost to be calculated?  Does the report effectively summarize the wall covering choices? | 0  0  0  0 | 1  1  1  1 | 2  2  2 |
| *Step 5*  Were both drapes and blinds considered?  Is research sufficiently complete to allow a drapery cost to be calculated?  Is the cost of self-made drapes reasonable?  Is research sufficiently complete to allow a blind cost to be calculated? | 0  0  0  0 | 1  1  1  1 | 2  2  2 |
| *Step 6*  Is there a summary that includes a total cost?  Is there a listing of “do-it-yourself” tasks and a costing of professional installation?  Does the summary include all necessary information?  Is the letter to the radio station effective for the purpose intended?  Have graphs and charts been used to organize and analyze data?  Has technology been used effectively to enhance the project? | 0  0  0  0  0  0 | 1  1  1  1  1  1 | 2  2  2  2  2 |

(possible 40)

Student Reflection (write a short paragraph highlighting and explaining one aspect of the project you felt you did very well, and another aspect that you wished you could redo)